Integration & Harmonization

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Executive Summary

The Defense Standardization Program (DSP) Strategic Plan calls for uniting the disparate standardization processes throughout the DoD into a single standardization process and for DSP policy to be in harmony with other DoD initiatives. The IPT reviewed and addressed many disparate processes and initiatives including Acquisition Reform, Joint Technical Architecture, Special Process Initiative, and Reprocurement Reform. The IPT concluded that integration and harmonization of standardization processes involved the recommendations from all four DSP IPTs developed to implement the DSP Strategic Plan. This report illustrates how and why integration and harmonization are accomplished through the combination and integration of the various recommendations. The Information Exchange System (IES) Portal (see tab C1) is at the hub of the integration and harmonization strategy and unifies the entire standardization universe and the wider defense community in a single virtual picture.

Our concept of integration and harmonization is to connect the standardization community through the IES, an Internet portal, into a single, unified picture by linking standardization processes within and outside DSP cognizance; and to the practices of acquisition, operational, sustainment, and related military and civil communities. The current DSP portal will evolve into the IES Portal. Standardization activities, actions, and decisions occur in diverse ways in many places across DoD and its contractor community; however, providing a single, unified picture of the entire DoD standardization community with the greater community would be of great value.

A virtual standardization directory and roadmap made available through the DSP standardization portal (or the future IES portal) can help provide that single, unified picture. The standardization directory will identify and document the many organizations and activities that are involved with standardization. It will categorize the organizations in useful ways to permit users to search and query meaningful standardization forums, interests and knowledge management. To the degree possible, the portal will provide interpretive data to describe the objectives, initiatives, and status of listed standardization activities.

In this concept paper, we make the following recommendations:

- *Recommendation #1:* Adopt a long-term strategy through the IES to make the DSP portal readily and easily accessible to the broader acquisition, operational, sustainment, and related military and civil communities.

- *Recommendation #2:* Expand the DSP and its knowledge management portal to encompass performance-based acquisitions, interoperability, and logistics readiness in an active and comprehensive manner.

- *Recommendation #3*: Ensure that the IES is flexible to allow new portal connections between communities of practice, domains, or enterprises, while allowing standardization to fit the needs and circumstances of each as required, and yet remain simple to use.

- *Recommendation #4:* Expand the DSP scope to recognize and support the diversity and range of standardization activities, including non-traditional standardization activities on the IES, while maintaining appropriate requirements and process rigor for standardization documents traditionally addressed by the DSP.

Introduction

BACKGROUND

The IPT reviewed and addressed many disparate standardization processes and DoD initiatives including Acquisition Reform, Joint Technical Architecture, Special Process Initiative, and Reprocurement Reform. The IPT concluded that integration and harmonization involved all of the recommendations prepared to implement the DSP Strategic Plan. The set of recommendations in this Tab illustrates how and why integration and harmonization is accomplished through the combination and integration of the various recommendations. The set of recommendations in Tab C1 concerning the IES Portal forms the hub of the integration and harmonization strategy by unifying the entire standardization universe and the wider defense community in a single virtual picture.

SPECIFIC IPT TASKING

The set of recommendations contained in this Tab was prepared in response to DSP Strategic Plan in support of the Processes, Products, and Services goal and Tasks VI.D.1 and VI.E.1.

Processes, Products, and Services Goal: The DSP provides products and services of value to its customers through an integrated standardization process.

Objective VI.D: Disparate standardization processes throughout the DoD are united into a single standardization process	
Action VI.D.1 Integrate DoD standardization processes	**Key Steps** 1. Identify defense policies that contain standardization processes 2. Propose interfacing revisions 3. Develop an overarching policy as required
Objective VI.E: DSP policies are in harmony with other DoD initiatives	
Action VI.E.1 Harmonize DSP policy with significant DoD initiatives	**Key Steps** 1. Identify significant initiatives 2. Associate practices and purpose for comparison and interface with DSP 3. Revise DSP policies and procedures as appropriate

The set of recommendations in this Tab broadens the original tasking in the DSP Strategic Plan by moving beyond simply revising DSP policies and procedures as suggested in the key steps specified above.

RECOMMENDATIONS

Recommendation #1

Adopt a long-term strategy through the Information Exchange System to make the DSP portal readily and easily accessible to the broader acquisition, operational, sustainment, and related military and civil communities.

The key tool in this transformation is the IES, an Internet portal. DSPO should design the portal to serve the acquisition, operational, sustainment, and related military and civil communities as "a single point of entry for all things relating to standardization," and to realize the concept of one-stop-shopping to the fullest extent possible. DSPO first should align the standardization knowledge universe into a single, integrated resource to support the full range of engineering and standardization decisions required of decisionmakers.

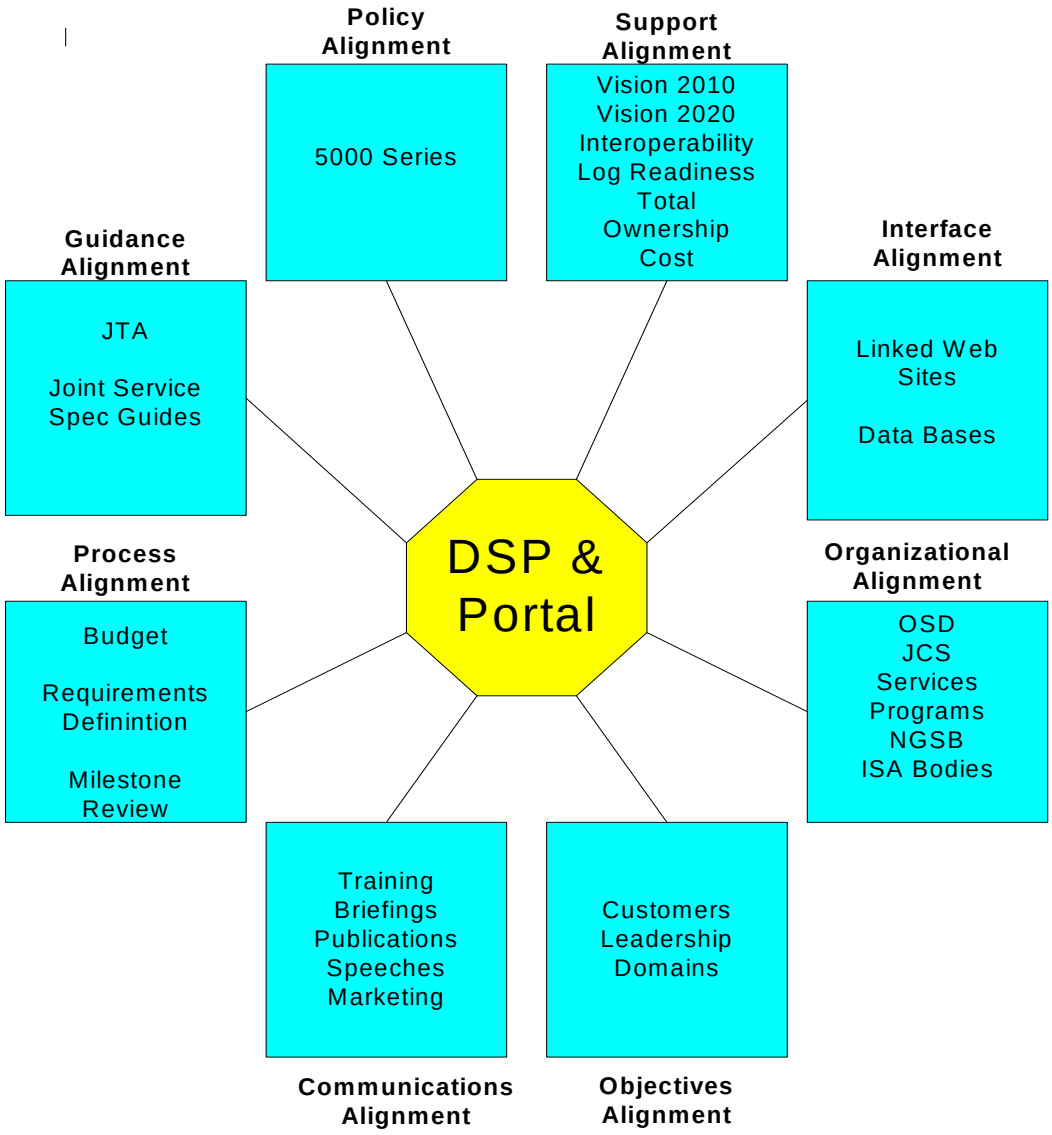
Figure 1 illustrates some of the key alignment targets for the standardization knowledge universe. The portal should then mature to advance beyond the historic DSP boundaries and products. The power of the portal lies in its capability to become the site of first choice for standardization information from the acquisition, operational, sustainment, and related military and civil communities.

The development of the portal involves multiple layers of information. As the number and richness of the layers increase, the power of the site to attract users will increase. Listed below are several potential layers of information:

- Unique DSP information, products, and services;
- DoD standardization activities and information outside official DSP;
- U.S. Government standardization activities and information outside official DSP;
- Non-government standards (NGS) standardization activities and information;
- Commercial and consortium standardization activities and information; and
- International standardization activities and information.

The portal should provide a directory or roadmap to the diverse community, and be of value to potential DSP customers. For example, including *all* international standardization agreements (ISAs) may have greater value to customers than including only materiel ISAs.

Figure 1. DSP Alignment Areas



Recommendation #2

Expand the DSP and its knowledge management portal to encompass performance-based acquisitions, interoperability, and logistics readiness in an active and comprehensive manner.

Standardization knowledge should be linked seamlessly with interoperability and logistics readiness information. The best way to draw customers to the DSP portal is to have the portal directly address customers' high priority objectives such as interoperability and logistics readiness. At best, customers see standardization as a means to an end, not an end in itself. If the DSP portal provides a valuable directory or roadmap to interoperability and logistics readiness, it will draw more interest and participation than if it was limited to standardization alone. With interoperability as a major focus, the portal will draw a wider audience and afford the DSP the opportunity to educate more people about the contributions of standardization to achieving interoperability. Features of the Portal related to interoperability and logistics readiness may include the following resources:

- Work Breakdown Structure Interoperability Tool (Interoperability and Logistics Readiness IPT recommendation)
- Weapon System Impact Tool (the IPT recommendation)
- Access to current ISAs and implementing documents
- Interoperability and Logistics Readiness forums
- Best practices from both DoD and industry
- Links to parts commonality databases and initiatives
- Examples of contract incentives
- Parts Management Program practices
- Lessons learned
- User forums and discussion areas
  - Systems engineering practices
  - Software engineering practices
  - Contractor Logistics Support (CLS) issues and practices
  - Acquisition initiatives
  - Performance-based acquisition practices
  - Configuration control issues.

Recommendation #3

Ensure that the IES is flexible to allow new portal connections between communities of practice, domains, or enterprises, while allowing standardization to fit the needs and circumstances of each as required, and yet remain simple to use.

The usefulness of the portal lies in its capability to remain the site of first choice for standardization information from the acquisition, operational, sustainment, and related military and civil communities. The IES should be allowed to expand and grow into multiple layers of information. As the number and richness of the layers increase, the power of the site to attract users will increase.

Recommendation #4

Expand the DSP scope to recognize and support the diversity and range of standardization activities including non-traditional standardization activities on the IES, while maintaining appropriate requirements and process rigor for documents, such as military standards and specifications, traditionally addressed by the DSP.

We should embrace non-traditional standardization without imposing DSP policies and procedures on them. Today, some of the non-traditional standardization practices exist in part because of the unwillingness of the participants to work within the standardization business rules and to comply with the rigorous process for developing and revising standardization documents. Another factor is the lack of awareness by the participants that the DSP is available and beneficial. Awareness of both non-traditional and traditional standardization through the IES can stimulate an exchange of ideas and constructive differences. Bringing the diverse standardization activities together into a single location and context will increase the value of the resulting combined products and services to customers. Through these exchanges, we envisioned that some constructive changes could come about in both the non-traditional and traditional standardization communities. If anything, both communities will better understand each other.

CONCEPT OVERVIEW

Integration and harmonization are processes to unify the standardization community into a single, unified picture. Achieving this purpose will improve how the DSP functions relate to standardization processes currently outside DSP cognizance. Bringing the diverse standardization activities together into a single location and context will increase the value of the resulting combined products and services to customers.

First, it may be helpful to define integration and harmonization in the context of the IPT’s assigned tasks.

- Objective VI.D states, “Disparate standardization processes throughout the DoD are united into a single standardization process.”

  Disparate means “markedly distinct in quality, character,” or “containing or made up of fundamentally different and often incongruous elements.”

- Action VI.D.1 states, “Integrate DoD standardization processes.”

  Integrate is defined as “forming or blending into a whole,” “uniting with something else,” or “incorporating into a larger unit.”

For the DSP, integration involves identifying and blending the totality of DoD standardization processes, however disparate, into a united whole by incorporating them into a single, larger (virtual) unit.

- Objective VI.E states “DSP policies are in harmony with other DoD initiatives.”

  Harmonization is defined as “having the parts agreeably related,” “to bring into consonance or accord,” or alternatively, “not to clash or be in conflict.”

For the DSP, harmonization involves all DoD programs and initiatives in which standardization plays a role. This will assure that both DSP policy and execution support achieving customers’ objectives and help identify and remove conflicts.

We believe that each of the IPTs’ recommendations contribute to integration and harmonization. Taken as a whole, the solutions proposed in this and other sets of recommendations combine to satisfy the integration and harmonization objective and support the needs of the broad standardization community. Appendix A illustrates how each set of IPT recommendations supports the objective.

KNOWLEDGE MANAGEMENT

Knowledge management is the key to integrating and harmonizing the large and diverse standardization community. Because standardization pursuits are so diverse, physical or organizational integration among standardization activities is impractical, if not impossible. Yet, we all acknowledge that the standardization process is integral to the acquisition and logistics processes within every weapon system program, and in every military service and defense agency, including the processes of every contractor. People in many different organizations and locations are involved in standardization decisionmaking. They need the most complete, accurate, comprehensive, and useful information possible to enable optimum outcomes for their particular purpose.

Standardization involves many different processes. Some standardization processes are institutionalized through documentation, education, or tools. All the

relevant standardization policies and processes should be included in the knowledge management framework. The following functions may be included in the integrated knowledge management resource:

- Educating people about the judicious practice and potential value of standardization,
- Identifying standardization opportunities,
- Identifying when to use (and when to avoid) standardization,
- Defining standardization requirements,
- Defining standardization policy,
- Conducting standardization-related research,
- Making standardization decisions,
- Documenting standardization decisions,
- Developing, coordinating, and publishing standardization documents,
- Participating in standardization deliberations or consensus bodies,
- Participating in developing ISAs,
- Assembling standardization-related data,
- Translating standardization data into information and knowledge,
- Making standardization knowledge available to people,
- Obtaining resources to enable standardization,
- Measuring the results and benefits of standardization,
- Approving standardization projects, and
- Training standardization practitioners and future DSP users.

While most of these already exist within the framework of the DSP, many people throughout the DoD participate in or perform standardization-related activities with no knowledge of the DSP or recognition that they are performing “standardization” work.

OPPORTUNITY

Role of the IES Portal. The integration strategy begins with the IES portal, the focal point at which all standardization information, processes, organizations, interests, tools, and resources converge. All people can share a single integrated view of the standardization universe through a common window. The portal will serve as a virtual water cooler around which people can gather and exchange their ideas and help unite the fragmented standardization universe into a single, unified community.

A well-designed and managed portal can become the premier knowledge management system for standardization. Properly executed, the portal will portray standardization as a unified picture even when diversity and differences exist across the system. Where diversity and differences yield inferior results, the portal will manifest these conflicts, create opportunities for dialogue, and aid in conflict resolution.

Shared visions, policies, processes, tools, metrics, organizations, domain structures, training and education, and other factors play important roles in facilitating the integration of the standardization universe into a single system. The portal will tie all these factors together.

The portal should be used to encourage the use of standardization whenever and wherever it advances DoD objectives to achieve greater interoperability, increased logistics readiness, or reduced cost. The portal should be used to effectively communicate standardization concepts, successes, and lessons to key decisionmakers. Reflect the total spectrum of standardization information and resources in a single mirror for the user or decisionmaker.

Virtual Integration. The portal should be used to achieve virtual integration in a way that adds value for all participating parties. It should be used to demonstrate to participating parties that being part of a central standardization directory is in their best interest. Integration should achieve the following results:

- Enable visibility across the standardization community.
- Enable users to extract standardization information from a single location.
- Make people aware of the richness and diversity of standardization activities.
- Facilitate communication within communities of practice.
- Enable standardization-related research.
- Move toward increasing standardization working relationships.

This effort is valuable only if it produces better outcomes than the current situation. Better outcomes would include

- lower costs,
- faster results, and
- increased interoperability and logistics readiness.

Better outcomes are possible when people have better information or knowledge as a basis for their decisions. Integrating standardization processes into a united, whole picture will make essential information more readily available and more complete, and thus easier to translate into useful knowledge.

IMPLEMENTATION STRATEGY

Following are some of the steps that need to be considered to develop a long-term strategy that will make the DSP Portal accessible to the broader acquisition, operational, sustainment, and related military and civil communities:

- Adopt a long-term strategy to make the DSP portal and its standardization knowledge management capability as broad and encompassing as possible.
- Expand the DSP and its knowledge management portal to encompass performance-based acquisitions, interoperability and logistics readiness in an active and comprehensive manner.
- Engage and partner with key participants across the acquisition, standardization, interoperability, and logistics readiness communities to provide and maintain content related to their activities using portal resources.
- Construct the portal to clearly portray standardization as a single community despite its diversity.
- Establish forums, tools, and connections through the portal that will expand dialogue and cooperation across the communities.
- Establish feedback mechanisms within the portal that will enable users to identify areas of discord within the standardization and acquisition communities, and provide mechanisms to aid in resolving conflicts. Actively monitor portal content to identify and help resolve discord and to continually improve the directory and roadmap based on customer utilization and satisfaction.

Appendix A
How IPT Recommendations Help Implement Integration and Harmonization

Each IPT's set of recommendations plays some role in implementing and achieving integration and harmonization. The table below shows how the various recommendations contribute.

Recommendation	Integration Contribution	Harmonization Contribution
IES Portal	The portal is the primary integration mechanism. It unites all standardization community participants and resources in one location. It provides a common forum for standardization information exchange and knowledge management.	By placing all standardization resources in a shared space, critical differences will become apparent. By creating forum space dedicated to resolving these differences, the community gradually will eliminate disharmony.
DSP Structure	By aligning the structure to customer-defined domains, the DSP will be more integrated with customers' business processes.	By aligning DSP data and documents with domains, areas of harmony or disharmony will be more visible and corrective actions will be taken.
Common Enterprise Forums	By identifying or establishing common enterprise forums and by having DSP participation in the forums, the DSP products and services will become more integrated with interoperability decision processes. Standardization will become an essential and integral part of the interoperability solution.	By participating in the forums, the DSP representatives will discover opportunities to improve and tailor DSP products and tools to bring the DSP into greater harmony with the customers' processes and needs.
Training Strategy	Training delivery is through the portal as well as through other traditional means. Training mini-courses can be prepared that specifically link DSP to other standardization activities or to customers' domains and processes. The training will serve to integrate the DSP with the target activities both in fact and in the students' perceptions.	Preparing training courses that illustrate how standardization supports or works with related processes will expose areas of disharmony and afford the DSP opportunities to increase harmonization.

Recommendation	Integration Contribution	Harmonization Contribution
Funding Strategy	A properly designed funding strategy will integrate the DSP funding process with OSD and Service planning and budgeting cycles.	By executing an annual plan and budget in coordination with the defined sources of DSP funding, potential disharmonies will be identified and improvements made to increase harmony.
ASSIST Enhancements Strategy	The ASSIST enhancement strategy should constantly move the DSP toward greater integration with DSP-related organizations and databases. ASSIST should move toward seamless information exchange and connectivity with related web locations.	As ASSIST moves toward greater integration with related electronic information sources, it will necessarily encounter and remove interface barriers. As these barriers fall, the DSP will be moving toward increased harmony.
Document Development and Coordination	Properly implemented, the DSP electronic document development and coordination capability will help integrate the DSP with other standardization bodies. The coordination capability should support DoD coordination of NGS and ISA documents as well as MilSpec documents.	If NGS and ISA bodies are encouraged and enabled to use the coordination capability within the IES for their documents, then DoD can be better informed of changes.
Weapon System Impact Tool	The Weapon System Impact Tool will achieve integration of several different databases by linking data. In addition, because the tool will be useful for program managers and others, it will help integrate the DSP in their work environments.	When the information in several different databases is integrated using the tool, obvious differences or disharmonies in the data will become clear. Means to reconcile these differences will increase harmonization.
Integration and Harmonization	Integration of the DSP with customer-owned work processes is a crucial element of the DSP strategy. Success depends on focusing the DSP resources on solving customers' highest priority objectives such as interoperability. Expanding the DSP role to include interoperability will advance integration.	Harmonization should focus on two themes. First, ensuring the DSP supports customers' needs. This requires active and ongoing dialogue with customers. Second, having fast, effective mechanisms to identify and resolve differences and remove barriers between the DSP and related areas. Portal resources facilitate this.
ISA Database	Creating the ISA database and involving the ISA bodies in maintaining that data will serve to integrate the DSP with the ISA bodies' processes.	As efforts unfold to make the ISA databases interactive, it will be necessary to identify and remove interface barriers, thus advancing harmonization.
Program Managers' ISA Support Tool	The ISA tool will help integrate the DSP into program management processes. Including all types of ISAs in the database	By linking ISAs to weapon systems, including showing which programs are compliant, the barriers to compliance will become

Recommendation	Integration Contribution	Harmonization Contribution
	would increase that integration further than listing only materiel ISAs.	more evident. Addressing these barriers will increase harmonization.
Work Breakdown Structure (WBS)–Interoperability Tools	Making the IES portal a key site for interoperability information as well as standardization information will play a major role in integrating the DSP into the customers' work environment and awareness. Creating interoperability support tools will play a major role by integrating the DSP into the program manager's tool set. Linking the DSP to solving high priority objectives will give the DSP greater recognition and credibility.	By working with the defense community to improve material interoperability, we will encounter areas of disharmony that will require improvements in tools and processes. Solving these issues will increase harmony.
Logistics Readiness Support Tools	Making the IES Portal a key site for logistics readiness information as well as standardization information will integrate the DSP with the logistics community. Creating a logistics readiness support tool will bring the DSP into the logistics community's tool set. Linking the DSP to solving logistics issues also will give the DSP greater recognition and credibility.	By working with the defense community to improve logistics readiness, we will encounter areas of disharmony that will require improvements in tools and processes. Solving these issues will increase harmony.
Customer Awareness and Involvement	Customer awareness and involvement are the very essence of integration. No matter how well the portal brings standardization and related knowledge together in a single location, if customers lack awareness of the resource or fail to use it then integration has no value. The most critical dimension of integration is to effectively market the IES to customers.	Customers will be actively engaged by the DSP through the Portal. Soliciting their input and facilitating feedback will continuously improve the knowledge management capability. Customer focus and responsiveness to customers' needs will move the DSP steadily toward greater value and harmony with customer requirements.
Electronic Products and Services	The Portal is the integration focal point. Integration will increase as the percentage of standardization community DSP products and services available electronically through the Portal increases.	DSP electronic products and services will be available to any user with a web browser and Internet connection. This will enable the DSP to operate in harmony with customers' disparate computer systems.